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Attorney Docket: 8045-52 (PX1686-US/SSD)

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1. Name of conveying party(ies):
Beak-Hyung CHO, Choong-Keun KWAK
Additional name(s) of conveying party(ies) attached? Yes No

2. Name and address of receiving party(ies):
Name: SAMSUNG ELECTRONICS CO., LTD.
Internal Address: 416, Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, Korea
Additional name(s) & address(es) attached: Yes No

3. Nature of conveyance:
 Assignment Merger
 Security Agreement Change of Name
 Other
Execution Date: July 10, 2004

4. Application number(s) or patent number(s):
If this document is being filed together with a new application, the execution date of the application is: July 10, 2004
A. Patent Application No. (s) _____
B. Patent No. (s) _____
Additional numbers attached? Yes No

5. Name and address of party to whom correspondence concerning document should be mailed:
Name: Frank Chau, Esq.
Street Address: F. CHAU & ASSOCIATES, LLC
130 Woodbury Road
City: Woodbury State: NY Zip: 11797

6. Total number of applications and patents involved: 1
7. Total fee (37 C.F.R. §3.41): \$40.00
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9. Statement and signature.
To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.
Frank Chau
Registration No. 34,136
Name of Person Signing _____ Signature
Total number of pages including cover sheet, attachments and documents: 3
Date 10/20/04

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AS A BELOW NAMED INVENTOR, I, and each of us, individually hereby declare that: IN CONSIDERATION of the sum of TEN (\$10.00) dollars or the equivalent thereof, and other good and valuable consideration, the receipt of which from the hereinafter named Assignee is hereby acknowledged, I do hereby sell, assign and forever grant and convey unto:

ASSIGNEE: Samsung Electronics Co., Ltd.

ADDRESS: 416, Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, KOREA

Who is my Assignee, and to the successes and assigns of my Assignee, all my right, title and interest, in and for the United States of America and all other countries, including all rights of priority, in and to the invention entitled:

TITLE: **WRITE DRIVER CIRCUIT IN PHASE CHANGE MEMORY DEVICE AND METHOD FOR APPLYING WRITE CURRENT**

invented by me (if only one inventor is named below) or us (if more than one inventor is named below) and described in an application for a United States patent the specification of which is either attached hereto or otherwise accompanies this Assignment or indicates an attorney docket no. 8045-52 (PX1686-US/SSD), or is more particularly identified as:

G executed on even date herewith, or
G Serial No. _____ filed in the U.S. Patent & Trademark Office on _____,
or
G executed on _____,

and in and to all United States patents which may be granted thereon and therefore, and in and to all certificates of corrections, divisions, continuations, continuations-in-part, reissued and re-examined patents, and to any extensions thereof, said interest being the entire ownership of the patent when granted, to be held and enjoyed by said **SAMSUNG ELECTRONICS CO., LTD.**, my Assignee, its successors, assigns or other legal representatives, to the full end of the term, terms, or any extension or renewal thereof, for which said patent or patents may be granted, as fully and entirely as the same would have been held and enjoyed by me or us if this assignment, sale and conveyance had not been made;

AND I hereby covenant and agree to sign and execute any further documents or instruments which may from time-to-time be either necessary, lawful, proper or requested by the Assignee, in the prosecution of the above-named application or in the preparation and prosecution of any certificate of correction, division, continuation, continuation-in-part, reissue, re-examination, in any amendment, extension, or interference proceeding, whether administrative or judicial, or otherwise, to secure the title hereto in said Assignee;

AND I do hereby authorize and request the Commissioner of Patents and Trademarks to issue said Patent or Patents to the Assignee, and I hereby appoint as my, or our attorney, and authorize and request Frank Chau, Reg. No. 34,136, to insert on this Assignment any further identification or to complete such identification which may be either necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

IN WITNESS WHEREOF, I and we have set our hands and seals on the dates written
beside
my and our respective names:

INVENTOR(S)

Date Signed

1) BEAK-HYUNG CHO
BEAK-HYUNG CHO

07/10/2004

2) Choong-Keun KWAK
CHOONG-KEUN KWAK

07/10/2004